



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,683	02/09/2006	Noriko Kibayashi	0925-0228PUS1	2115
2292	7590	04/04/2008	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				ALSOMIRI, ISAM A
3662		ART UNIT		PAPER NUMBER
04/04/2008		NOTIFICATION DATE		DELIVERY MODE
				ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/567,683	KIBAYASHI ET AL.	
	Examiner	Art Unit	
	Isam Alsomiri	3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 09 February 2006.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1,2,9 and 10 is/are rejected.
 7) Claim(s) 3-8 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 09 February 2006 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>020906; 061507</u> . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katsutoshi et al JP2003248057 in view of Farmer et al US 6,085,151. Referring to claims 1 and 2, Katsutoshi discloses 1-8 a radar device including: an antenna for receiving as reception waves radio waves coming from a plurality of external targets; a signal detector for converting the reception waves received by the antenna into received signals to extract quantities characterizing the received signals; and a position/velocity computing unit for calculating, from the received-signal characterizing quantities extracted by the signal detector, observed position values and observed velocity values of each of the external targets; the radar device characterized by a target tracking filter for performing a correlation process, based on first gates, on the observed position values and the observed velocity values calculated by the position/velocity computing unit, to calculate, from the observed position values and the observed velocity values that satisfy the first gates, smoothed values of the positions and velocities of each of the external targets. Katsutoshi does not teach the clustering unit, the intra-cluster target tracking filter to calculate the smoothed values of the positions and velocities of each of the external targets.

However, clustering multiple targets that are close to each other is well known in radar systems since the resolution might not be enough to clearly distinguish between far close targets. Farmer teaches the clustering unit and intra cluster target tracking filter as claimed (see figure 8 and 9, col. 11:32 to col. 12:67); it would have been obvious to modify Katsutoshi to include the clustering unit to reduce the processing of the system for far close targets.

Referring to claims 9 and 10, Katsutoshi is silent about the trivial details of claims 9 and 10. However, Farmer discloses in figure 1-11 the antenna (12) mounted in a vehicle (3) radiates toward the external targets a reference signal having an up phase for continuously increasing the frequency and a down phase for continuously decreasing the frequency as transmission waves having beam patterns in a plurality of directions; the signal detector generates, in the up phase and in the down phase, beat signals from the received signals and the reference signal; and the position/velocity computing unit calculates, from the beat signals in the up phase and the beat signal in the down phase, relative velocities and relative distances of the external targets, calculates directions of the external targets from differences in quantities characterizing the beat signals in adjacent beam patterns, and calculates, from the relative velocities, the relative distances, and the directions, the observed position values and the observed velocity values of the external targets (see col. 8:13 to col. 11:4). It would have been obvious to modify Katsutoshi to include the well known techniques of detecting relative distance and velocity and to increase the accuracy of the system from

the continuous variation of the frequency as mentioned above to which reduces false alarms in the detections.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isam Alsomiri whose telephone number is 571-272-6970. The examiner can normally be reached on Monday-Friday 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

March 29, 2008

/Isam Alsomiri/
Primary Examiner, Art Unit 3662